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IN THE CLAIMS:

Please cancel claims 1-3 and 5-8 without prejudice. Please add new claims 9 to 17 as follows.

These claims will replace all prior versions of claims in the present application.

Claims 1-3 (canceled)

4. (Currently amended) A parallel divided flow fluid supply apparatus, comprising:

(a) a pressure regulator having an upstream side and a downstream side;

(b) a plurality of parallel flow passages disposed downstream of the~~said~~ pressure regulator, wherein a single flow of fluid from the~~said~~ pressure regulator is branched into the~~said~~ parallel flow passages;

(c) a plurality of flow control valves disposed in the~~said~~ flow passages; and

(d) a plurality of pressure flow control systems for controlling of the flow rate, one controller installed on each flow passage between two of the~~said~~ flow control valves disposed upstream and downstream of the~~said~~ controller respectively, wherein each pressure flow control system comprises:

(i) an orifice formed downstream of the control system and upstream of the downstream flow control valve for discharging fluid from the flow passage;

(ii) a control valve installed upstream of the orifice and downstream of the upstream flow control valve of the control system for controlling the flow rate of the fluid;

(iii) a pressure detector disposed between the orifice and the control valve for detecting the pressure P_1 between the control valve and the orifice;

(iv) a calculation control circuit, wherein with a pressure on an upstream side of the orifice set to be twice or more higher than a pressure on a downstream side of the orifice, the instantaneous flow rate Qc is calculated as $Qc = KP_1$, where K is a constant, from the pressure P_1 on the upstream side of the orifice detected by the pressure detector, and a difference between an instantaneous flow rate Qc and a preset flow rate Qs is outputted as control signal Qy; and

(v) a drive connecting the control valve and the calculation control circuit for receiving the control signal from the calculation control circuit and for sending the control signal to the control valve causing the control valve to operate to bring the control signal Qy to zero.

Claims 5-8 (canceled).

9. (NEW) A parallel divided flow fluid supply apparatus as recited in claim 4, wherein the plurality of pressure flow control systems operate to correct transient mutual pressure changes in the plurality of flow passages, thereby maintaining steady fluid flow.

10. (NEW) A parallel divided flow fluid supply apparatus, comprising:

(a) a pressure regulator having an upstream side and a downstream side;

(b) a plurality of parallel flow passages disposed downstream of the pressure regulator, wherein a single flow of fluid from the pressure regulator is branched into the parallel flow passages, wherein the plurality of parallel flow passages includes a first flow passage disposed in parallel with a second flow passage;

(c) a plurality of flow control valves disposed in the flow passages; and

(d) a plurality of pressure flow control systems for controlling of the flow rate, one controller installed on each flow passage between two of the flow control valves disposed upstream and downstream of the controller respectively, wherein each pressure flow control system comprises:

(i) an orifice formed downstream of the control system and upstream of the downstream flow control valve for discharging fluid from the flow passage;

(ii) a control valve installed upstream of the orifice and downstream of the upstream flow control valve of the control system for controlling the flow rate of the fluid;

(iii) a pressure detector disposed between the orifice and the control valve for detecting the pressure P_1 between the control valve and the orifice;

(iv) a calculation control circuit, wherein with a pressure on an upstream side of the orifice set to be twice or more higher than a pressure on a downstream side of the orifice, the instantaneous flow rate Qc is calculated as $Qc = KP_1$, where K is a constant, from the pressure P_1 on the upstream side of the orifice detected by the pressure detector, and a difference between an instantaneous flow rate Qc and a preset flow rate Qs is outputted as control signal Qy; and

(v) a drive connecting the control valve and the calculation control circuit for receiving the control signal from the calculation control circuit and for sending the control signal to the control valve causing the control valve to operate to bring the control signal Qy to zero.

11. (NEW) A parallel divided flow fluid supply apparatus as recited in claim 10, wherein the pressure flow control system installed on the first flow passage between two

flow control valves operates to correct transient pressure changes in the first flow passage, thereby maintaining steady fluid flow in the first flow passage.

12. (NEW) A parallel divided flow fluid supply apparatus as recited in claim 11, wherein the pressure flow control system installed on the second flow passage between two flow control valves operates to correct transient pressure changes in the second flow passage, thereby maintaining steady fluid flow in the second flow passage.

13. (NEW) A parallel divided flow fluid supply apparatus as recited in claim 10, wherein the pressure flow control system installed on the first flow passage between two flow control valves and the pressure flow control system installed on the second flow passage between two flow control valves operate to correct transient mutual pressure changes in the first flow passage and the second flow passage, thereby maintaining steady fluid flow in the first flow passage and the second flow passage.

14. (NEW) A parallel divided flow fluid supply apparatus, comprising:

(a) a pressure regulator having an upstream side and a downstream side;

(b) a first flow passage and a second flow passage disposed in parallel with each other and downstream of the pressure regulator, wherein a single flow of fluid from the pressure regulator is branched into the parallel flow passages;

(c) a plurality of flow control valves disposed in the flow passages; and

(d) a plurality of pressure flow control systems for controlling of the flow rate, one controller installed on each flow passage between two of the flow control valves disposed upstream and downstream of the controller respectively, wherein each pressure flow control system comprises:

(i) an orifice formed downstream of the control system and upstream of the downstream flow control valve for discharging fluid from the flow passage;

(ii) a control valve installed upstream of the orifice and downstream of the upstream flow control valve of the control system for controlling the flow rate of the fluid;

(iii) a pressure detector disposed between the orifice and the control valve for detecting the pressure P_1 between the control valve and the orifice;

(iv) a calculation control circuit, wherein with a pressure on an upstream side of the orifice set to be twice or more higher than a pressure on a downstream side of the orifice, the instantaneous flow rate Qc is calculated as $Qc = KP_1$, where K is a constant, from the pressure P_1 on the upstream side of the orifice detected by the pressure detector, and a difference between an instantaneous flow rate Qc and a preset flow rate Qs is outputted as control signal Qy; and

(v) a drive connecting the control valve and the calculation control circuit for receiving the control signal from the calculation control circuit and for sending the control signal to the control valve causing the control valve to operate to bring the control signal Qy to zero.

15. (NEW) A parallel divided flow fluid supply apparatus as recited in claim 14, wherein the pressure flow control system installed on the first flow passage between two flow control valves operates to correct transient pressure changes in the first flow passage, thereby maintaining steady fluid flow in the first flow passage .

16. (NEW) A parallel divided flow fluid supply apparatus as recited in claim 15, wherein the pressure flow control system installed on the second flow passage between two

flow control valves operates to correct transient pressure changes in the second flow passage, thereby maintaining steady fluid flow in the second flow passage.

17. (NEW) A parallel divided flow fluid supply apparatus as recited in claim 14, wherein the pressure flow control system installed on the first flow passage between two flow control valves and the pressure flow control system installed on the second flow passage between two flow control valves operate to correct transient mutual pressure changes in the first flow passage and the second flow passage, thereby maintaining steady fluid flow in the first flow passage and the second flow passage.